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10/530,041

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Takeshi Kodu

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YOUNG & THOMPSON

209 Madison Street

Suite 500

ALEXANDRIA, VA 22314

EXAMINER

KHAN, ASHER R

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                    |  |
|------------------------------|--------------------------------------|------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/530,041 | <b>Applicant(s)</b><br>KODA ET AL. |  |
|                              | <b>Examiner</b><br>ASHER KHAN        | <b>Art Unit</b><br>2621            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/12/2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

2. Claims 15- 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 15-17 define a computer program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium

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it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). That is, the scope of the presently claimed computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person.

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

4. Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 18 define a control signal with descriptive material. While “functional descriptive material” may be claimed as a statutory product (i.e., a “manufacture”) when embodied on a tangible computer readable medium, a signal embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible “thing”) and therefore does not fall within

one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**6. Claims 1-6, 8-14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,246,402 B1 to Setogawa et al. "Setogawa".**

As to claims 1, 9, 10, 11-13, 14 and 18, Setogawa discloses an information record reproduction apparatus comprising:

a first record device for recording video information to indicate a main-video (Fig. 5;Col. 13, lines 62-67, col. 14, lines 1-4);

a second record device for recording sub-video information to indicate a sub-video displayable at least partially over the main-video (Fig. 5;Col. 13, lines 62-67, col. 14, lines 1-4); and

a third record device for recording sub-video control information including (i) sub-frame range information to indicate at least a partial area of the sub-video as a sub-frame (Fig. 7, Col. 16, lines 7-26), and (ii) shadow display control information to add a shadow (Fringe) selectively to a sub-video part within the sub-frame in accordance with an alpha value (Ratio of transparency) indicating transparency of the sub-video part, and display the sub-video part to which the shadow is added over the main-video (Fig. 2A; Col. 7,

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lines, 30-65);

a reproduction device for reproducing the video information, the sub-video information and the sub-video control information (Col. 1, lines 10-20);

a display output device capable of displaying and outputting the reproduced sub-video information over the reproduced video information (Fig. 8, 332); and

a control device for controlling the display output device to add a shadow to the sub-video part within the sub-frame, and display the sub-video part to which the shadow is added over the main-video, on the basis of the shadow display control information in the reproduced sub-video control information (Figs. 2A, 7; Col. 7, lines 22-26; Col. 16 lines 7-26, 46-55; Col. 7, lines, 30-65).

As to claim 2, Setogawa further discloses wherein the shadow display control information includes information to add the shadow relative to a transparent part of the sub-video part within the sub-frame having the alpha value (Ratio of transparency) equal to a predetermined value, and display the part to which the shadow is added (Col. 7, lines 25-65).

As to claim 3, Setogawa further discloses, wherein the shadow display control information includes information to add the shadow relative to a design having an outline within the sub-frame, and display the design to which the shadow is added (Col. 16, lines 7-26, 46-55).

As to claim 4, Setogawa further discloses, wherein the shadow display control information includes information to add the shadow relative to an outline of the sub-frame, and display the outline to which the shadow is added (Col. 16, lines 7-26, 46-55).

As to claim 5, Setogawa further discloses wherein the shadow display control information includes information to virtually define a disposition of a light source relative to the shadow and a disposition of a surface on which the shadow is projected (Fig. 2A, (Fringe is a shadow of the "+" that has a disposition of certain surface area in the)).

As to claim 6, Setogawa further discloses, wherein the shadow display control information includes information to define color of the shadow (Col. 7, lines 59-65).

As to claim 8, Setogawa further discloses wherein the main-video information, the sub-video information and the sub-video control information are divided into predetermined packet units and multiplexed, and further streamed relatively into a video stream composed of the divided main-video information, a sub-picture stream composed of the divided sub-video information and a control information stream composed of the divided sub-video control information (Fig. 5, Col 13, lines 51-67, Col. 14, lines 1-22).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,246,402 B1 to Setogawa et al. "Setogawa" and in view of U.S. Patent 6,434,326 B1 to Kondo et al. "Kondo" in further view of U.S. Patent Pub. 2003/0002741 A1 to Peters.**

As to claim 7, Setogawa as modified as discussed in claim 1 above does not expressly disclose defining blurring degree of an image i.e. shadow .

Peters discloses defining blurring degree of an image (0031; using of frequency to define a degree blur of an image i.e. shadow).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Setogawa as modified with the teachings of Peters. Motivation to combine would have been to provide a certain degree of sharpness to the shadow so that maximum clarity of the shadow can be obtained.

**9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,246,402 B1 to Setogawa et al. "Setogawa" and in view of U.S. Patent 6,434,326 B1 to Kondo et al. "Kondo"**

As to claim 16, Setogawa does not expressly disclose computer program making the computer function as at least a part of the reproduction device, the display output device and the control device.

Kondo disclose a computer program making the computer function as at least a part of the reproduction device, the display output device and the control device (Fig. 6; Col. 18, lines 11- 41; Fig. 6 contains recording device that is connected to computer and information is transferred from the recording device to be reproduced ).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Setogawa with the teachings of Kondo. Rationale to combine would have been that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with



no change in their respective functions, and combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**9. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,246,402 B1 to Setogawa et al. "Setogawa" and in view of U.S. Patent 6,434,326 B1 to Kondo et al. "Kondo" in further view of U.S. Patent Pub. 2002/0051408 A1 to Kondo "Kondo\_2".**

As to claims 15 and 17, Setogawa does not expressly disclose a computer program making the computer function as at least a part of the first record device, the second record device, the third record device, the reproduction device, the display output device and the control device.

Kondo discloses a computer program making the computer function as at least a part of the reproduction device, the display output device and the control device (Fig. 6; Col. 18, lines 11- 41; Fig. 6 contains recording device that is connected to computer and information is transferred from the recording device to be reproduced ).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Setogawa with the teachings of Kondo. Rationale to combine would have been that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Kondo as modified does not expressly disclose a computer program making the computer function as at least a part of the first record device, the second record device,

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the third record device.

Kondo\_2 disclose a computer making the computer function as a recording device (0017; It would have been obvious to one with ordinary skill in the art to separate the recording device into discrete components of recording)

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Setogawa with the teachings of Kondo\_2. Rationale to combine would have been that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHER KHAN whose telephone number is (571)270-5203. The examiner can normally be reached on 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/  
Supervisory Patent Examiner, Art Unit 2621  
/A. K./  
Examiner, Art Unit 2621